The Beeswax Wreck of Nehalem

A Lost Manila Galleon

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FOR CENTURIES, people have known of the wreck of a large vessel on or near the shores of Nehalem Spit, south of Neahkahnie Mountain in Tillamook County, Oregon. In addition to the Nehalem-Tillamook and Clatsop Indians who witnessed the wrecking and passed its history on to later generations, there are eyewitness accounts of wreckage in the surf near the river mouth and on the spit. There are also artifacts, such as beeswax blocks and ship’s rigging pieces, known or believed to be from the so-called Beeswax Wreck, in museums and private collections throughout the Pacific Northwest. What has not been known, however, is the name of the vessel, its port of origin or nationality, or where it was going. Over the centuries, various scholars and treasure hunters have proclaimed the wreck to be a Spanish galleon, a Portuguese or Dutch merchant or pirate ship, or a Chinese or Japanese junk. Shipwrecks are valuable, not for any treasure they may have carried but because they serve as time capsules that can provide information about the lives and activities of their passengers and crew and the larger societies in which those people lived — information that is often missing in written history.

In 2006, a volunteer group of archaeologists, historians, geologists, and community members set out to apply the methods and principles of archaeological and historical research to determine the nationality of the Beeswax Wreck, its port of origin and likely destination, the identity of the vessel, and its final resting place. The group founded a non-profit research organization, eventually becoming the Maritime Archaeological Society, the sponsor of the research. This article outlines our research process and conclusions, supporting our hypothesis that Santo Cristo de Burgos is most likely the ship that wrecked on Nehalem Spit.

THE SEARCH BEGINS: OF WHAT NATION WAS THE OREGON SHIPWRECK?

Historians and wreck enthusiasts, drawing on nineteenth- and early-twentieth-century accounts, have written extensively about the Beeswax Wreck. During the 1980s and 1990s, archaeologists in Oregon became interested in the wreck and the artifacts it left behind on the nearby beaches and in Indian archaeological sites. Some of this research is useful, while other pieces of it are little more than speculative fantasy born of uncritical acceptance of earlier sources or misunderstandings of the Pacific trade prior to 1800, particularly the Manila trade conducted by the Spanish between the Philippines and Mexico. One of the first goals of...
the Beeswax Wreck Project was to systematically research and document the known historical and archaeological materials related to the wreck. To this end, the project team compiled an archaeological research design to guide future research.8

The Spanish Empire was fond of record-keeping. Those documents make it possible to know which Spanish ships sailed in any given year and, often, who their captains and crews were, the dates they left Manila, and when the ships arrived (if they did) in Acapulco. The galleons were the economic lifeblood of Spain’s Manila colony, and any loss of a ship was extensively investigated, often for years, in an effort to recover the cargo or at least to learn the ship’s fate. The archives therefore include extensive records on which ships were lost, never seen again after leaving Manila. The number of those that went missing without a trace is surprisingly small, considering the 250-year span of the trade and the vast distances that the Manila galleons traveled.

Although previous researchers postulated that the Beeswax Wreck was a Portuguese or Dutch vessel, or an Asian junk drifting across the Pacific, the Beeswax Wreck Project focused on the Spanish Manila trade primarily because of the signature artifact that gave the wreck its name and notoriety: the large blocks of beeswax found at Nehalem and nearby beaches, with so-called “mysterious” symbols carved upon them. Those symbols actually are not at all mysterious — to those who study the history and archaeology of Spanish trade in the Americas and in both the Pacific and Atlantic oceans. The symbols are Spanish shippers’ marks, carved into the soft beeswax as a label. The carved labels allowed sellers to track their cargoes and collect their profits when the ship reached port. All the galleons’ cargo was so marked, either with paper labels or with marks carved onto the shipping boxes or jars. Because beeswax is weatherproof, it did not need to be carefully packed, like silks or other textiles, and the shippers’ personal symbols could be directly marked on the blocks.9

While Chinese and Japanese merchants did trade in beeswax, they did not do so in the large volumes that the Spanish were known to carry on the Manila galleons. Neither the Japanese nor the Chinese were actively trading in the Americas at the time of the Beeswax Wreck, so any junks that reached the continent would have had to drift across the Pacific Ocean on the Kuroshio-North Pacific Current, which flows northward off the east coast of Japan and south of the Aleutian Island chain. Of these “across the ocean” drift wrecks in the Pacific and on the American West Coast, only Japanese junks, rather than Chinese vessels, are the known sources. Chinese junks were extremely well built and could weather storms and rough seas and still be seaworthy, meaning they were fully capable of crossing the Pacific, but they operated primarily in the China Sea between the rich trade ports of China, Japan, and other Asian nations.10

Japanese junks, in contrast, were not built for open seas and rough weather. This was due to the Edict of Sakoku, issued in 1635 by the Tokugawa Shogunate, which closed Japan to visiting ships and mandated that Japanese vessels not be capable of traveling great distances over open water. This edict resulted in many Japanese junks trading along the east coast of Japan, getting dismasted or losing their rudders in storms, and then being left to drift helplessly on the Kuroshio-North Pacific Current until they either sank or washed ashore somewhere along the coast of western North America.11 Finally, and most simply in light of the beeswax, Chinese and Japanese merchants did not use Spanish shipping symbols for their cargoes. The presence of those symbols indicates the Beeswax Wreck was a Spanish Manila galleon, eastbound for Acapulco and loaded with cargo from Asia.

The same arguments hold true for Portuguese and Dutch merchants: they did not trade in large quantities of beeswax, because they had no need to. The Spanish shipped beeswax from Asia to the New World to make candles to light churches and wealthy people’s homes. There were no native honeybees in the Americas at that time, and the Catholic Church required beeswax candles in liturgy. The Dutch and Portuguese, trading westward to Europe, had no need or market for large quantities of beeswax, and what beeswax they did carry was not marked with Spanish shipping symbols. European pirates — regardless of their nationalities — would be unlikely to load beeswax as stolen cargo, considering the much more valuable cargoes of silks, spices, and porcelains that galleons and other traders of the west Pacific carried. As some of the earliest chroniclers of the Beeswax Wreck asserted, there is no doubt the vessel was a galleon of the Manila trade, eastbound to the Americas with a cargo of luxury goods from Asia destined for the markets and the wealthy citizens of New Spain in Central and South America.12

THE SEARCH NARROWS: A MANILA GALLEON, BUT WHICH ONE?

Having established from the material evidence that the Beeswax Wreck must have been an eastbound Manila galleon, the question becomes “which galleon?” Only four of the nearly 300 galleons that left Manila during the 250-year period of the trade were truly lost to the Spanish. Many galleons wrecked, sunk in storms, or were captured by hostile nations, but the Spanish were aware of the majority of those losses and often knew where the ship sank, or who
captured it. With that knowledge, the Spanish could sometimes mount salvage operations to recover at least part of the cargo as well as any survivors. Of the four missing eastbound galleons that sailed from Manila, no wreckage was ever found, and no survivors ever turned up to account for the vessels.

Those lost vessels fall into two chronological groups: the San Juanillo and the San Juan were both lost in the sixteenth century, in 1578 and 1586, respectively. The Santo Cristo de Burgos and the San Francisco Xavier were lost at the turn of the seventeenth to eighteenth centuries, in 1693 and 1705, respectively. The gap of more than a hundred years between the two groups was key to narrowing down which vessel was most likely the Beeswax Wreck. Radiocarbon dating, while incredibly useful for archaeology, is of limited use for dating shipwrecks within the past 500 years, due to fluctuations in the radiocarbon curve during that period and the resulting chronological range of radiocarbon dates. Chinese porcelain artifacts associated with the wreck, particularly luxury Chinese export porcelains destined for the markets of New Spain, however, are datable by their stylistic motifs to much shorter spans of time.

Although the wreck site itself has not been found, it is known to be the source of a large collection of ceramic sherds. This collection of over 1,500 sherds has been amassed over the past twenty-five years by local beachcombers around Nehalem, and it consists of Chinese export porcelains and Asian stonewares. Many of the pieces are quite small and waterworn, but many also contain design elements that form distinctive patterns that changed in fashion over time. Such elements include certain types of leaves, vines, or flowers, or details such as people, geometric patterns, and even reign marks. Comparing these design elements to known styles from dated periods allows archaeologists and art historians to determine when the pieces from the shipwreck were manufactured, and thus allows us to date the wreck with relative precision. The porcelains associated with the Beeswax Wreck date to the Kangxi period, meaning they were manufactured sometime between 1661 and 1722; this rules out the two wrecks from the sixteenth century as the vessel lost at Nehalem. Accepting that the Beeswax Wreck is a Manila galleon, it must be either the Santo Cristo de Burgos or the San Francisco Xavier.

The Santo Cristo de Burgos and the San Francisco Xavier wrecked only twelve years apart, and in the world of archaeology, twelve years is a very small span of time to pin down without a securely dated artifact, such as a coin or a cannon with a date inscribed on it. Coincidentally, here in the Pacific Northwest, an event occurred in the year 1700, between the two wrecks, that has helped us determine which of the two missing galleons the Beeswax Wreck is most likely to be.

On the night of January 26, 1700, the large subduction zone off the Northwest Coast known as the Cascadia Subduction Zone, released its pent-up energy in a great earthquake that resulted in a trans-Pacific (far field) tsunami, as recorded in Japan. Subduction zones such as the Cascadia can store up great amounts of strain energy over several hundred years, releasing massive earthquakes, with moment magnitudes greater than 9.0 on the Richter Scale with associated tsunamis. The earthquake of January 1700 was one of these mega-quakes, and it is known to have generated a tsunami that was about twenty-five feet in shoreline runup height. In addition to the tsunami, the earthquake’s tectonic subsidence caused portions of today’s Washington and northern Oregon coast to sink as much as five feet, leading to widespread and rapid beach erosion. After several years of beach retreat after the tsunami (totaling 100 to 400 meters), the later uplift would result in not only beach recovery but also burial of the steeply eroded beach, or scarp.
Because the earthquake occurred between the losses of the two missing galleons, the tsunami and the post-subsidence beach erosion had a major impact on where the shipwreck remains ended up, and therefore can help us determine which of the two missing galleons was responsible for the Beeswax Wreck. A ship wrecking after the tsunami, for example, could have left wreck debris along the eroded beach but not above the reach of the highest tides and storm waves, where only an older tsunami could have reached.

THE SAN FRANCISCO XAVIER HYPOTHESIS

Our initial hypothesis regarding the identity of the wreck was that it must post-date the tsunami, because we assumed that a near-shore wreck or beach wreck struck by the tsunami would be so widely scattered as to be effectively destroyed. The post-tsunami wrecking of the San Francisco Xavier also made sense from a historical point of view. William Schurz, the historian most often noted as the “dean” of Manila galleon history, wrote in his seminal 1939 history of the Manila trade that the Santo Cristo de Burgos burned near the Marianas Islands in the west Pacific, as was reported by archival accounts of survivors who made it to the Philippines.22 With the Santo Cristo de Burgos thus accounted for, the only missing galleon that fit into the chronological period of the known artifacts was the San Francisco Xavier of 1705.

With this hypothesis in hand, we began to investigate the effects of the earthquake and tsunami on the spit. This phase of the project relied on geology and geomorphology, rather than archaeological or historical investigations. Collaborating with the Geology Department of Portland State University, we undertook ground-penetrating radar (GPR) surveys of the Nehalem Spit to look for buried evidence of the post-subsidence (subsidence being the sudden drop in land that caused the tsunami) retreat scarp and to establish whether the length of the spit had changed substantially over time. GPR allows investigation into the buried features of sand deposits prior to ground-truthing with coring or excavations, and it reveals detailed profiles of sand deposits to depths of up to thirty feet.23 We found the beach retreat scarp buried under the more recent foredune, some 200 meters from the modern shoreline, and determined that the spit had extended south to its current position during the recent geologic past.24 Any wreck debris left along the eroded ocean beach strand lines (high-water marks) of the Nehalem sand spit during the early 1700s would now be buried under at least thirty feet of accreted foredune sand deposits, along the length of the spit.

While conducting the GPR study, the researchers noted an interesting geological feature: over portions of the spit, between the river and the high foredune of sand built up along the beach, were exposed patches of cobbles and boulders, poorly sorted and spread in a thin sheet. In some places, these cobbles were covered by windblown sand, and in others, they were exposed and cut through by eroded recreational trails. Enough patches were exposed to indicate that a large area of the spit was covered by a thin, sheet-like layer of cobbles and coarse river sand.

The archaeologists on the research team assumed the rounded rocks were from a large river flood, but the geologists noted the rocks were too high in elevation on the spit to have come from any flood the river could produce. In addition, the cobbles and boulders were deposited in a variety of up-ended orientations within the coarse sand deposits, indicating hyper-
concentrated sand flow transport and deposition, as would occur during catastrophic tsunami surges.

River floods, in contrast, tend to leave gravel bars and deposits of similarly sized materials. The geologists had seen the pattern in an earlier investigation of potential tsunami cobble deposits on the spit, but local residents explained that the cobbles and boulders were the remains of a road constructed to build stone jetties at the river’s mouth in the early twentieth century. The archaeologists noted, however, that water-rounded cobbles and boulders make poor roads, and the cobbles were too widespread to be the remains of a road from that era. Likewise, the material was obviously not discarded ship’s ballast, because it was thinly spread over a very large area rather than concentrated near a landing or dock. After ruling out river floods, road-building, and discarded ship ballast as sources, the researchers came to the realization that the water-rounded cobbles and boulders, up to thirty inches long and 210 pounds weight, represented what tsunami specialists call a “cobble drape deposit”: a thin, widespread deposit of river and/or beach cobbles deposited onto the spit by overtopping tsunami flows. Such tsunami drapes occur over other sand spits and beach ridges in the study region, such as the Alsea Bay sand spit, the Seaside beach ridges, the Neskwoin sand spit, North Sand Point, and Olympic Peninsula.

The elevation of the post-tsunami Nehalem Spit had been high enough (eighteen feet plus or minus six feet above mean sea level) to protect it from subsequent river flooding or ocean storm waves. Until the latter half of the twentieth century, the Nehalem Spit was unvegetated, allowing windblown sand to migrate across it as dunes. Starting in the 1950s, the Oregon Parks and Recreation Department began planting non-native vegetation to stabilize the dunes and “improve” the spit for recreation, and these plantings spread and locked the dunes in place. This action left some parts of the cobble drape deposit exposed and other parts buried, allowing us to investigate the relationship of the drape deposit to the historic dune surface.

THE SANTO CRISTO DE BURGOS HYPOTHESIS

The presence of the cobble drape deposit allowed us to determine the elevation of the spit’s surface above sea level when the tsunami washed over it in 1700. It also gave us an indication of the minimum run-up height of the tsunami wave over the Nehalem Spit. The GPR surveys successfully identified the erosion scarp carved into the beach backshore following the co-seismic subsidence (the level of land drop during the earthquake). As previously mentioned, the co-seismic land subsidence of about one meter, following the great earthquake, caused widespread beach erosion in our study area. That beach erosion moved the storm wave strand line (wrack line) about 100 to 200 meters landward of the present shoreline. The post-earthquake strand lines are now buried under the prograded beach (that area built up toward the sea) and modern foredunes (those dunes nearest the sea), with the cobbles deposited by the tsunami and the wreck debris behind them.

These factors proved key in understanding the known and reported distribution of shipwreck materials across and over the spit. They also led to a surprising conclusion: the Beeswax vessel wrecked prior to the tsunami, rather than after it. There is no other way to account for the reported distribution of wreckage across the spit and into the bay. The spit did not erode low enough for normal ocean processes such as winter storm waves or high tides to wash any wreckage either onto the spit or over the eroded foredune. If the Beeswax ship had wrecked after the tsunami, its wreckage would never have made it off the beach and onto the spit or into the bay, where generations of beachgoers have found pieces of wax and debris. Deposited into the back dune area by the tsunami wave, above the reach of storm waves and high tides, the wreckage, including the beewax, stayed in place and therefore was able to be found by Native peoples and, later, by Euro-Americans. In addition, the windblown migrating dunes alternately buried and exposed ship timbers and beewax, meaning that every year, new deposits were exposed and others buried, resulting in a situation where different wreck materials could be found over a span of centuries.

That the Beeswax vessel wrecked prior to the tsunami of 1700 was surprising for two reasons. First, we had assumed that a tsunami of the size of the 1700 event would have either destroyed or scattered the wreckage so widely that it would never have been found. Second, as noted earlier, Schurz had written that the only late-seventeenth-century galleon that went missing (the Santo Cristo de Burgos) burned in the western Pacific, close enough to the Marianas Islands that charred timbers were found there and survivors made their way back to the Philippines in a small boat.

If the Santo Cristo de Burgos burned in the west Pacific, it should not have wound up on today’s Oregon coast with living crew, unless somehow the fire was extinguished after the survivors had escaped the burning ship. We considered that possibility, but it seemed very unlikely for several reasons. First, Manila galleons carried few small boats (as they took up precious cargo space and were not needed), and launching one from a burning ship would have been difficult even if one was available. Second, if the galleon burned badly enough to have timbers wash ashore in the Marianas Islands, it seems unlikely that the vessel could have been saved, much less jury-rigged to continue sailing across thousands of miles of open ocean to wreck on the
Oregon coast. Perhaps the fire had been a small one or the supposed survivors had instead deserted an undamaged ship, rather than abandoning a burning one, and the vessel continued across the Pacific; this scenario also seems unlikely.

We discovered that the Spanish archives contain a letter from the Governor of Mexico to the King of Spain, written in 1699, six years after the *Santo Cristo de Burgos* left Manila, informing the King that despite six years of searching the islands of the west Pacific and the coasts of New Spain, there was no trace of any survivors or wreckage from the vessel. The fire story was becoming more unlikely and more suspicious, especially as Schurz did not report the source of his story, and earlier researchers, such as Blair and Robertson (1909) and Dahlgren (1916), reported only that the *Santo Cristo de Burgos* had disappeared without any knowledge of its fate.33 (Additional information on this hypothesis is included in this issue’s article on the galleon’s fate, passengers, and crew, “The Galleon’s Final Journey: Accounts of Ship, Crew, and Passengers in the Colonial Archives.”)

The historical record is clear: the *Santo Cristo de Burgos* left the Philippines on July 1, 1693, and was never seen again—at least, by the Spanish.34 Schurz’s claim that the *Santo Cristo de Burgos* burned and that survivors returned to the Philippines to tell the tale is based on his uncritical acceptance of an apocryphal story first published in 1925 by Percy Hill, an American expatriate living in the Philippines.35 The *Santo Cristo de Burgos* is the best candidate for the Beeswax Wreck, as it is the only galleon that went missing in the seventeenth century before the Cascadia earthquake and tsunami of 1700, and the dates from artifacts known to be associated with the Beeswax Wreck indicate a mid- to late-seventeenth-century vessel.36 These artifacts include radiocarbon-dated beeswax samples and the porcelain cargo, which provides a chronologically tight dating span of roughly twenty years, from 1680 to 1700.37 To date, we have not found wreckage at Nehalem that definitely confirms the *Santo Cristo de Burgos* sank there. Nevertheless, the weight of evidence strongly supports the identification of the Beeswax Wreck as the *Santo Cristo de Burgos*.

First, we know that a vessel did wreck at Nehalem. There are oral histories of eyewitness accounts of the wreck from the Nehalem-Tilamook and Clatsop Indians, and those histories continued until the colonization of the Oregon coast by non-Indian peoples, who recorded them in writing. There are also recorded eyewitness accounts of a portion of a wrecked ship in the ocean just off the Nehalem River, close enough to shore to be briefly exposed at very low tides.38

Besides these accounts of the wreck of the vessel itself, there are the beeswax blocks and candles for which the Nehalem Spit is famous. It was the blocks and candles of beeswax that so intrigued the early explorers and settlers on the north Oregon coast and that caused so much interest in the wreck. People in the nineteenth century were fascinated by the idea that a single ship, particularly an unknown “ancient” ship, could have been large enough to carry so much beeswax. Debate raged for several decades as to whether the material was truly beeswax from a wrecked ship, or was instead a natural deposit of mineral wax associated with underground oil deposits. Many learned and educated people of the day could not accept that so much beeswax could come from a single ship, or that it could be so widespread over the spit and up the reaches of the river valley, occurring in areas above the reach of high tides or storm waves and in places several feet underground.39 This disbelief was despite the clear evidence of the beeswax having been molded into large blocks, the shipping marks, bees trapped in the wax, and the occurrence of candles with wicks. It was inconceivable, particularly for Americans, to imagine that some nation might have built large ships capable of carrying so much cargo across the Pacific; by the time American settlers arrived in the latter half of the nineteenth century, the Manila trade had ended (in 1815) and Spain was in decline as an empire.

Based on the archival, historical, archaeological, and geological evidence gathered to date, we know the following four facts. First, there was a wreck at Nehalem, as historically reported. Second, the wreck happened before 1700, as evidenced by the porcelain cargo it was carrying and the presence of wreck materials both in places where only the tsunami of 1700 could deposit them and within the tsunami deposit. Third, the wreck happened after 1650 and more likely after 1680, based on the manufacturing dates of the porcelain cargo. And fourth, the ship was a Manila galleon, because only Manila galleons carried such quantities of beeswax and Chinese export porcelain for the markets in New Spain. The only vessel sailing the Pacific that fits these four facts is the *Santo Cristo de Burgos*.

**BEESWAX AND ITS RELATION TO THE TSUNAMI**

Some researchers have argued that the Beeswax Wreck may have been an unknown, unrecorded galleon, rather than the *Santo Cristo de Burgos*.35 Because the Manila trade was so tightly regulated, and because the Spanish bureaucracy was so well developed, there were no “unknown” Manila galleons. While a small, independent merchant theoretically could have attempted
a smuggling voyage from Manila, it is very unlikely given the distances involved and the tight control over the trade by the Manila merchants. It is even more unlikely that such a vessel would have been carrying such a large cargo of beeswax when there were more profitable cargoes to smuggle. As noted earlier, no other nation at the time traded in large quantities of beeswax, and certainly not in blocks marked with Spanish shipping symbols.

The megaquakes of the twenty-first century in Indonesia and Japan provide modern examples of how tsunami waters can carry debris inland (as much as one mile overland) and deposit it on both inflow and outflow strand lines. The nineteenth-century accounts of wreck debris and where it was found often referred to the wreckage appearing to have been deposited in a “flood” or “freshet,” because the materials were found above the levels of the highest tides. It was the very fact that such large quantities of beeswax were present on the Nehalem Spit that drew early explorers, travelers, and settlers to comment on and write about the Beeswax Wreck and its possible origins. There were other places along the Northwest coast where Euro-Americans recorded seeing the timbers of old ships washed onto beaches, but such wrecks were usually mentioned only in passing and assumed to be lost whalers or Asian junks, when remarked on at all.

At Nehalem, however, it was the sheer volume of the beeswax and the guessed-at antiquity of it that fired the interest and imagination of decades of travelers and settlers. It is estimated that during the latter half of the nineteenth century, local people collected anywhere from six to twenty tons of beeswax and shipped it to markets in Astoria, Portland, San Francisco, and even Honolulu.

**SEARCHING FOR THE WRECK ON LAND AND AT SEA**

Knowing which ship wrecked at Nehalem and when it wrecked provides us clues of what to look for and even where to look, but the ocean is a large and difficult place to conduct archaeological surveys. This is particularly true of the exposed Oregon coast, open to the full expanse of the Pacific Ocean’s swells and winds. In addition, Nehalem is relatively remote, as Oregon coastal communities go; and the Nehalem River–mouth bar is shallow, dangerous, and difficult to cross most days of the year. The nearest good harbor is at Garibaldi, twenty-five miles to the south, making the round trip from Garibaldi to Nehalem and back in small boats difficult. Fog and swells can roll in on short notice, making navigation hazardous in the small, open-dive boats that can approach the chaotic surf-line against offshore sand bars and onshore sea cliffs in the vicinities of the Nehalem Spit and Neahkahnie Mountain.

To date, we have spent over ten years researching the Beeswax Wreck and searching for any remains that might provide the final proof that the ship was the *Santo Cristo de Burgos*. The first few years of our research were spent searching on land, and when we realized that the wreck predated the tsunami of 1700, our efforts shifted to looking offshore. Our current hypothesis is that the ship grounded in shallow water and broke up, with its upperworks washing...
onto the beach and then being washed over and onto the spit by the tsunami. If this model is correct, the lower hull of the vessel, with its ballast, cannons, and spare anchors, should still be offshore of the beach somewhere, buried in the sand. We plan to continue our search there, using remote sensing equipment to detect buried cannons or anchors. If we can locate such targets, we will investigate them with a remotely operated vehicle, or ROV, equipped with a camera that we can guide from the surface. Divers will then investigate any promising targets, to confirm the target and record it with photographs and detailed measurements. Any cluster of objects on the sand bottom offshore of Nehalem beach or sand spit would constitute a target; the difficulty will be in determining which algae or marine-growth covered objects are rocks and which might be ballast piles, corroded anchors, or cannons. Remotely observing wreck debris in the rocky ocean bottom offshore the headlands or coves north of Manzanita might not be possible, due to the strong currents and waves crashing against the rocky cliffs.

What happens if we find lower hull deposits of a galleon? The wreck, as a historical shipwreck and archaeological site, belongs to the State of Oregon — it cannot be salvaged or even archaeologically excavated without a permit and close oversight and cooperation by the Oregon State Historic Preservation Office and Oregon Parks and Recreation Department. Manila galleons, furthermore, were government-owned ships of the Kingdom of Spain. The modern country of Spain is the legal owner of the wreck and its cargo, and that nation would therefore have to provide permission for any archaeological investigations or recovery as well. (See the article in this issue, “The Mountain of a Thousand Holes: Shipwreck Traditions and Treasure Hunting on Oregon’s North Coast,” for further discussion of maritime law and shipwrecks).

For those of us researching the Beeswax Wreck, the goal has never been to recover artifacts or “treasure.” Instead, we are most interested in solving the mysteries of what ship wrecked on the north Oregon coast more than three-hundred years ago and why, and of how the survivors might have interacted with and integrated into the Native American communities they would have encountered once they made it to shore. It is unlikely we will ever know why a Manila galleon wrecked so far north of the usual eastbound sailing route, as there was no reason for the crew to be exploring the Pacific Northwest coast and nothing short of sheer desperation would have induced them to try to land on such an unknown shore. It is likely the ship was damaged in a storm and drifted uncontrollably to wreck on the Oregon coast. If wreck deposits can be found offshore, they may reveal whether the ship’s rudder was intact, or if the crew tried to set anchors before wrecking. It is possible, however, that the galleon wrecked on the rocks off Arch Cape or Neahkahnie Mountain, scattering pieces over a wide area of the ocean bottom. If that is the case, we may never find it — but we think that is less likely than the ship grounding or sinking, because of the historic accounts of relatively intact portions of wreckage just offshore and on the spit and because of the concentration of beeswax on the spit.

NOTES

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